

CW-ZH-0001

4G/2.4G External Combo Antenna

Key Features

Frequency: 698-960MHz/1710-2700MHz/2.4-2.5G

SMA Male Connector

Screw Mount

Dimensions 80*15mm



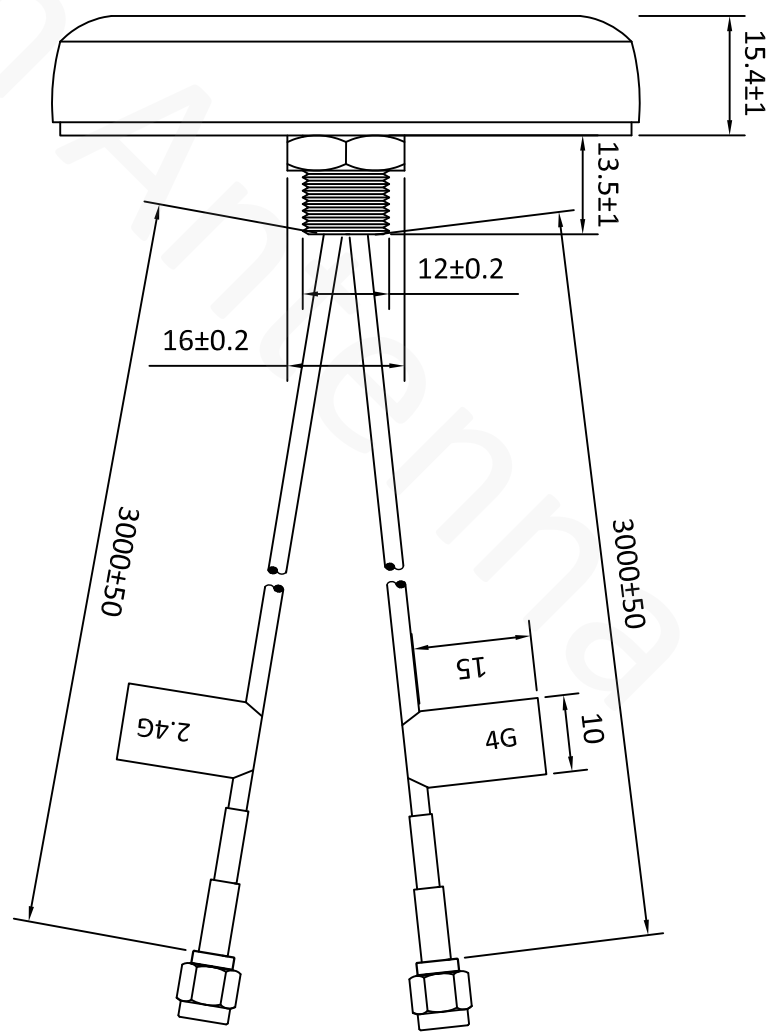
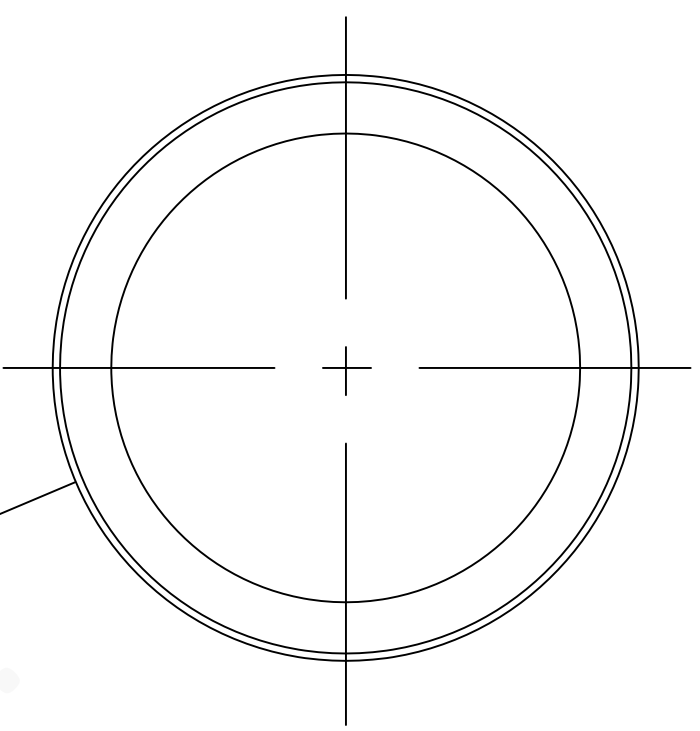
1. Antenna Electrical Characteristics

Band (MHz)			
Frequency (MHz)	698-960MHz	1710-2700MHz	2.4-2.5G
VSWR	2.5:1	2:1	2:1
Efficiency (%)	80.58%	77.21%	61.69%
Peak Gain (dBi)	2.89	4.09	3.33
Impedance (Ohm)		50	
Polarisation		Vertical	
Max. Input Power (W)		10	
Connector Type		SMA Male	

2. Material and environmental characteristics

inner structure	PCB
Material of Plastic	ABS
Cable Type	RG174
Connector Type	SMA Male
Dimensions (mm)	80*15MM
Antenna color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS

REV	Date	Description
X1	2021/10/09	New issue



Specification(Free Test):
 Frequency Range: 698-960MHZ/1710-2700MHZ
 Impedance: 50Ω
 V.S.W.R: $\leq 2.5/2$

Specification(Free Test):
 Frequency Range: 2.4-2.5G
 Impedance: 50Ω
 V.S.W.R: ≤ 2

8	Label	36*10MM	2	
7	Foam rubber	79*1MM	1	
6	Stud	Nickel plated brass	1	
5	Lower cover	Black ABS	1	
4	Shell	Black ABS	1	
3	Cable	RG174	1	
2	PCB	FR4	2	
1	Connector	SMA male	2	
NO	Name	Description	Q'TY	Remark
XX	±5.0	Approved		
X	±3.0	Checked		
.X	±1.0	Checked		
.XX	±0.2	Checked		
.XXX	±0.1	Checked		
		Drawing		
		Customer		
		Part NO.		
		Part name	Combined antenna	
		CW P/NO.	CW-ZH-0001	
		REV	X1	
		Unit	m/m	
		File		
		Sheet	1/1	



4. Antenna test parameters

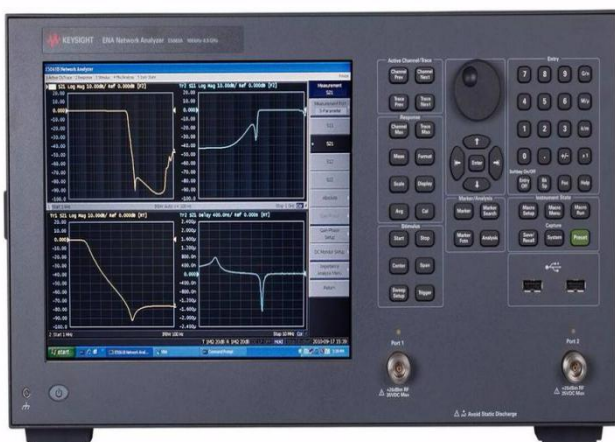
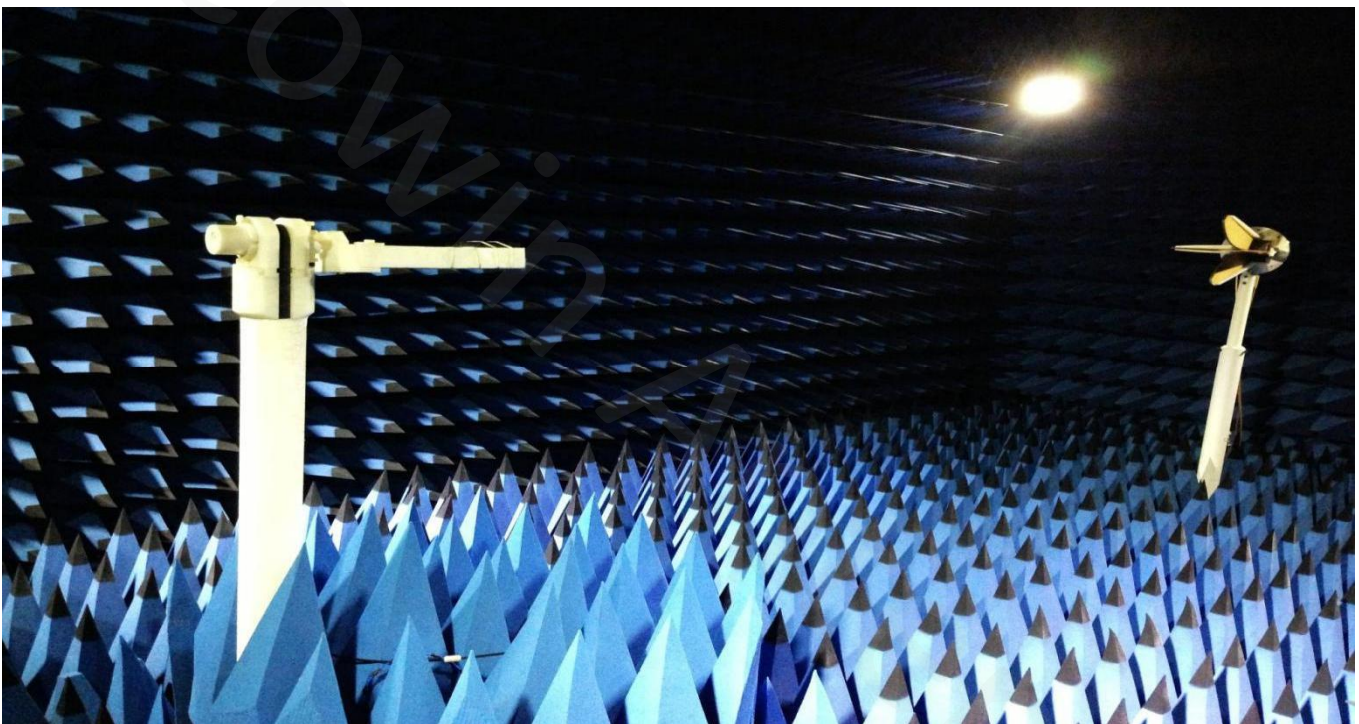
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

The comprehensive tester is Agilent cmv500

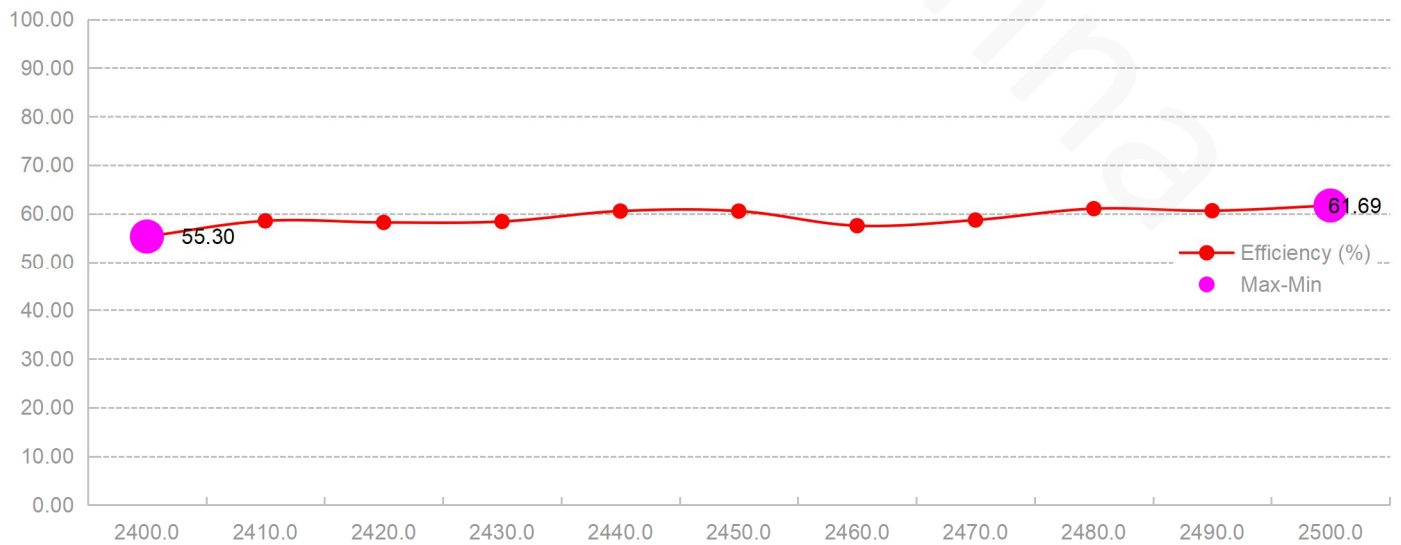
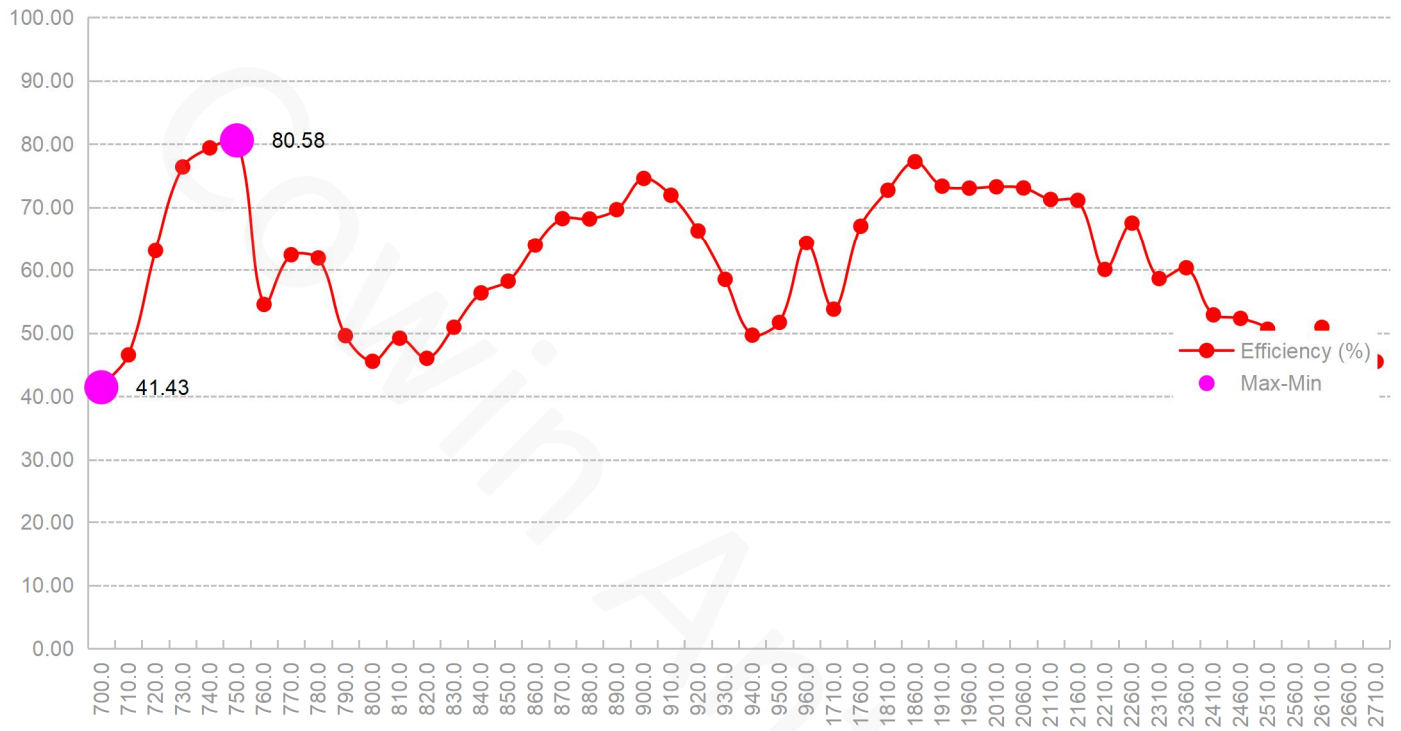


4.1 VSWR



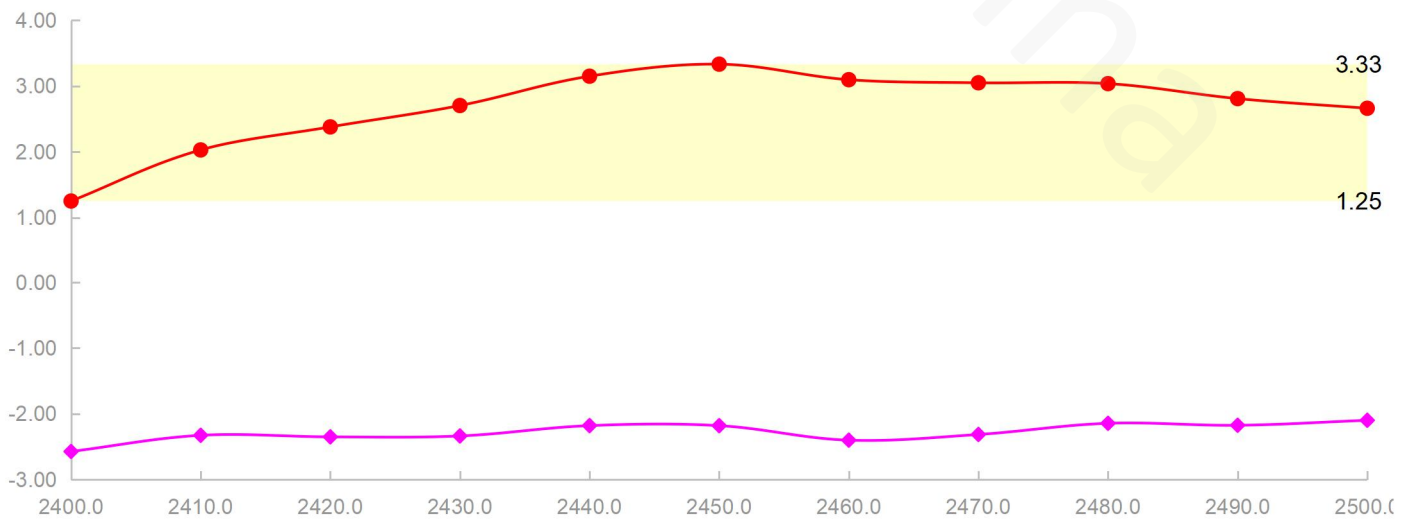
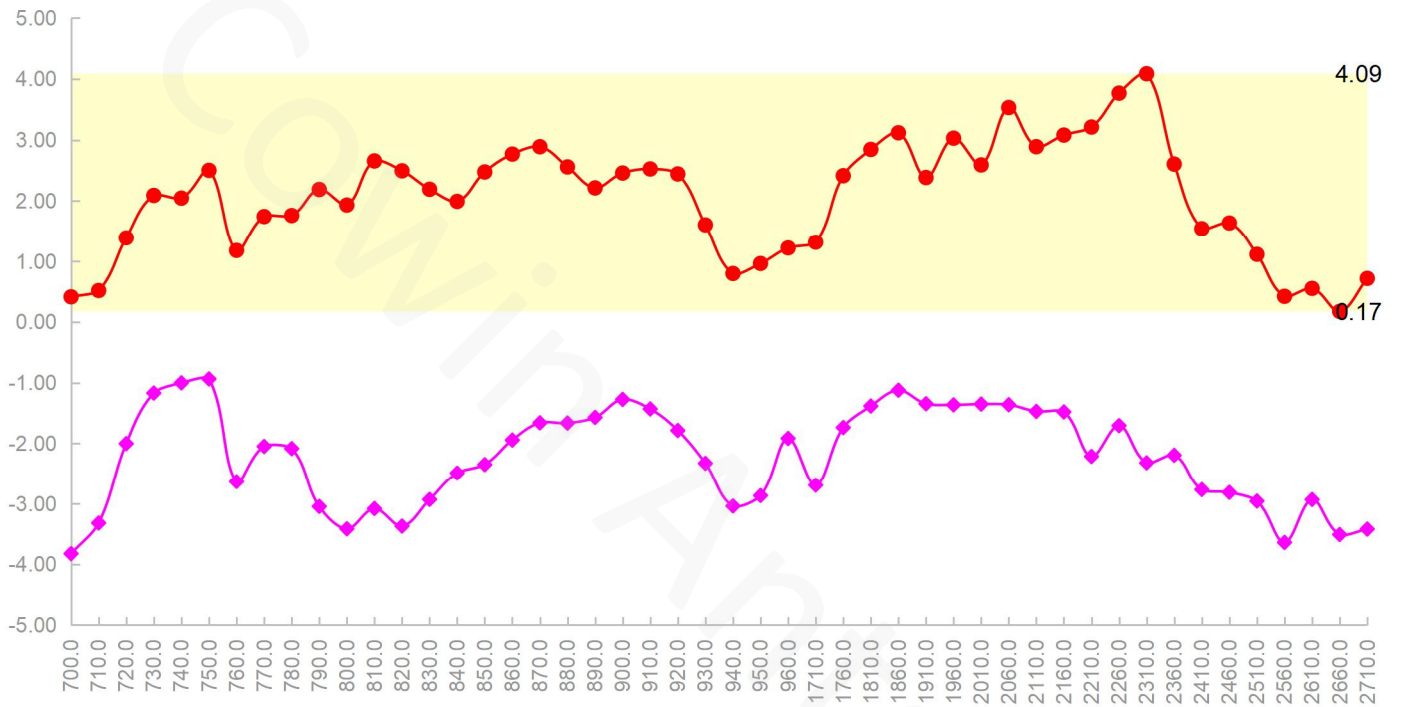


4.2 Efficiency

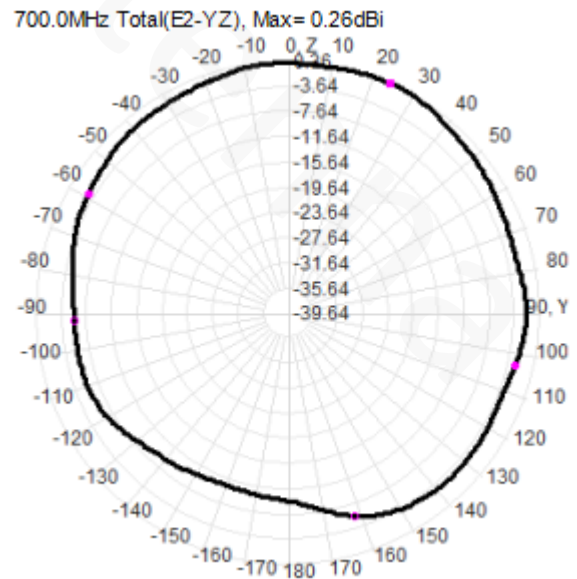
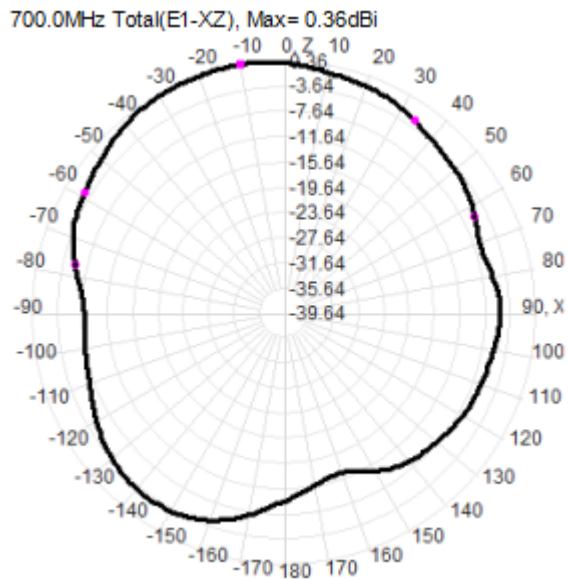
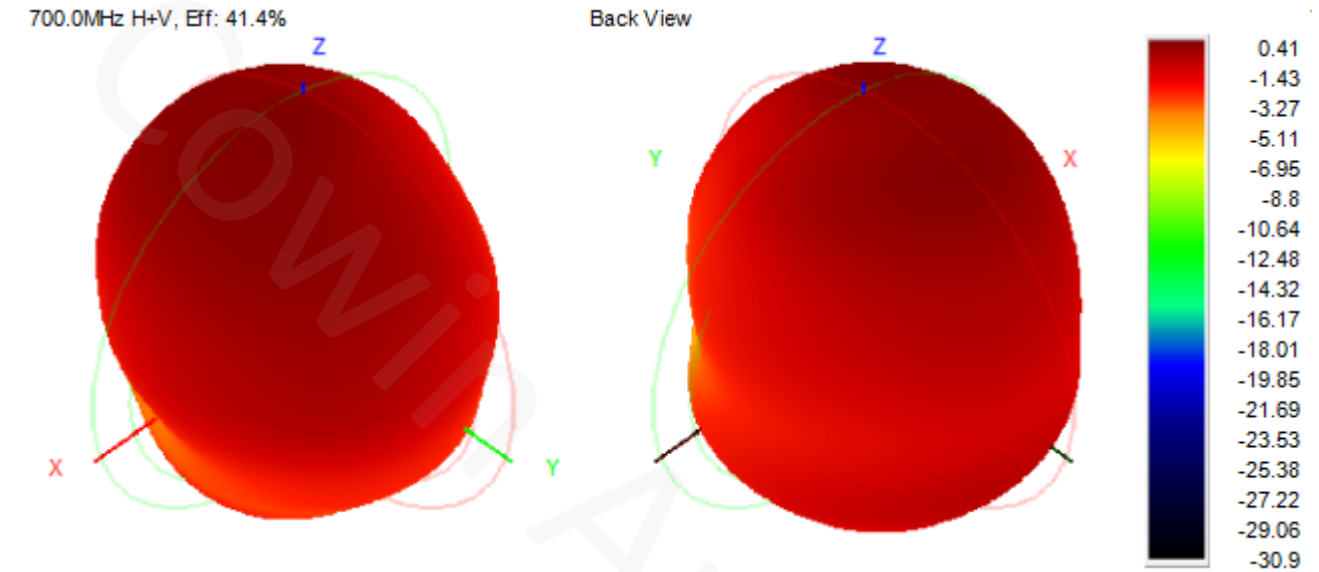


4.3 Peak gain

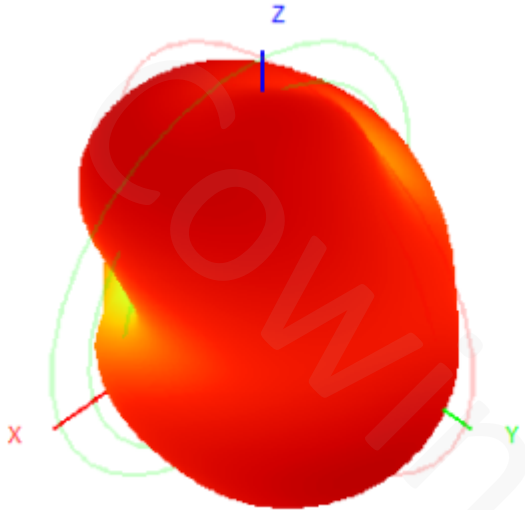
● Gain (dBi) ◆ Efficiency (dBi)



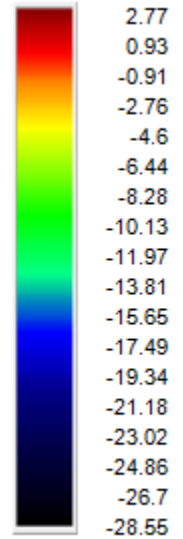
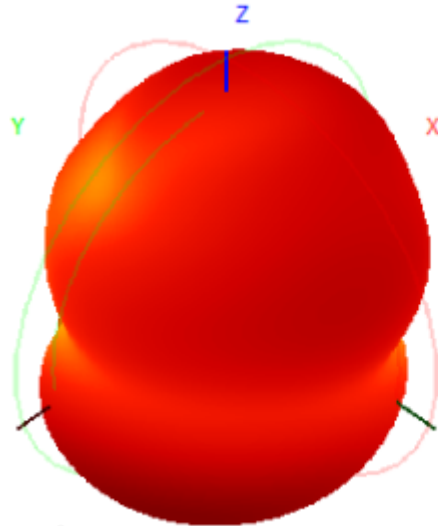
4.4 3D&2D Radiation Patterns



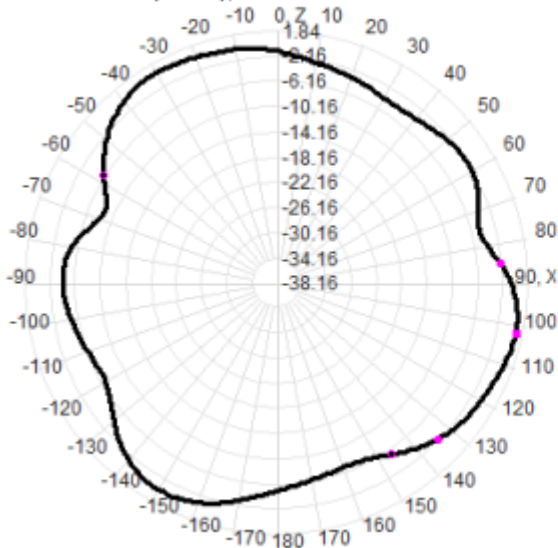
860.0MHz H+V, Eff: 63.9%



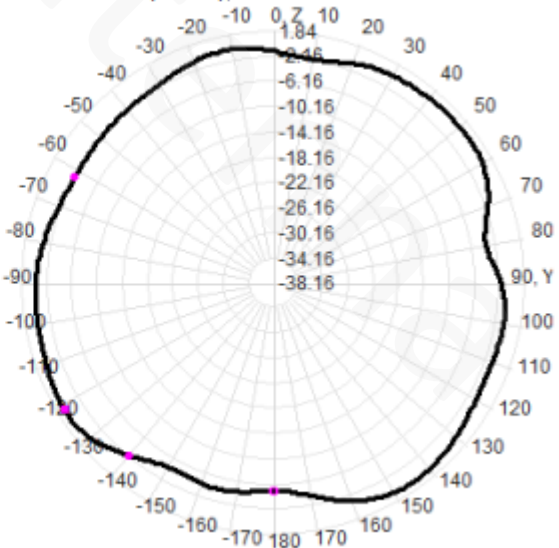
Back View



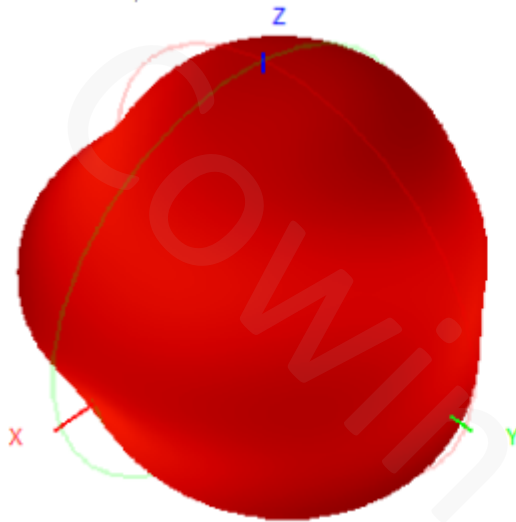
860.0MHz Total(E1-XZ), Max= 0.48dBi



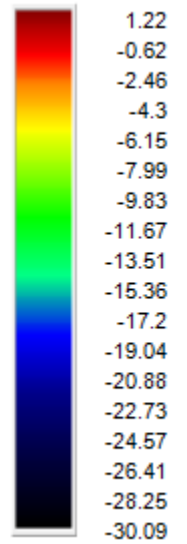
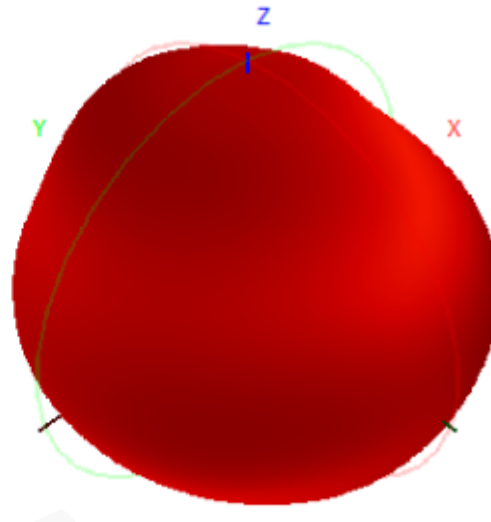
860.0MHz Total(E2-YZ), Max= 0.50dBi



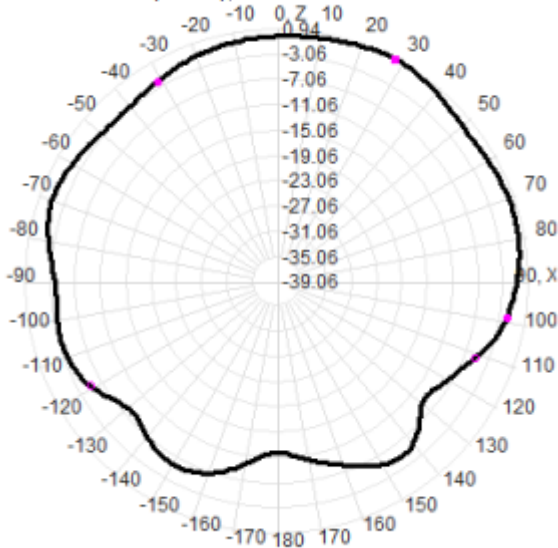
960.0MHz H+V, Eff: 64.3%



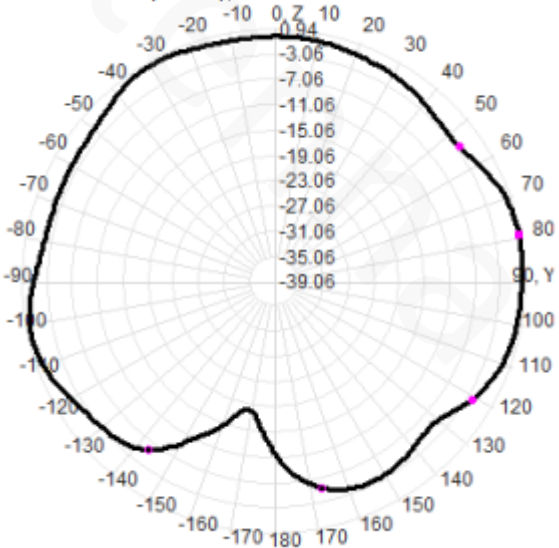
Back View



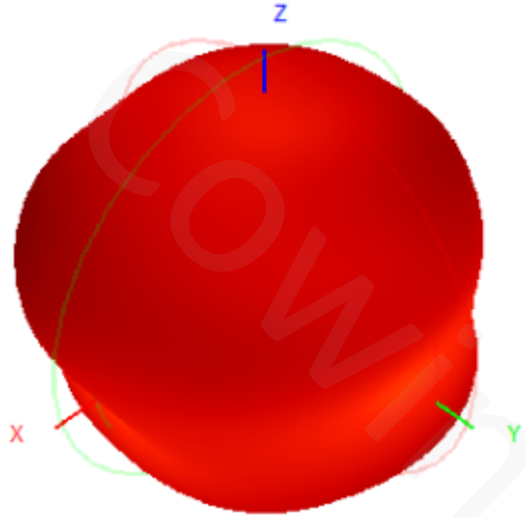
960.0MHz Total(E1-XZ), Max= 0.83dBi



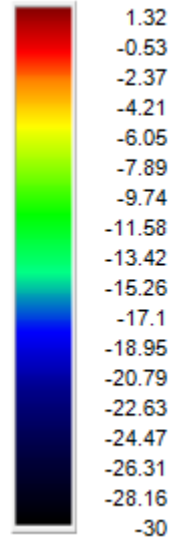
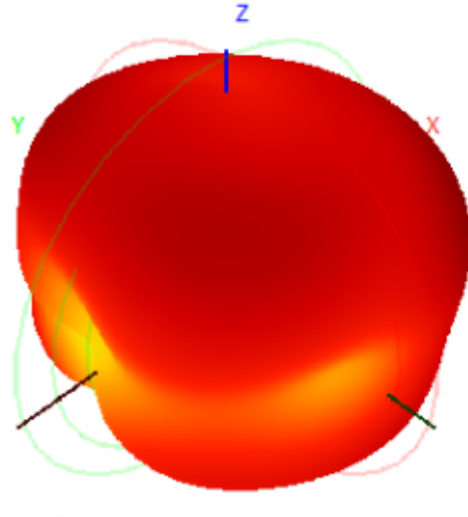
960.0MHz Total(E2-YZ), Max= 0.36dBi



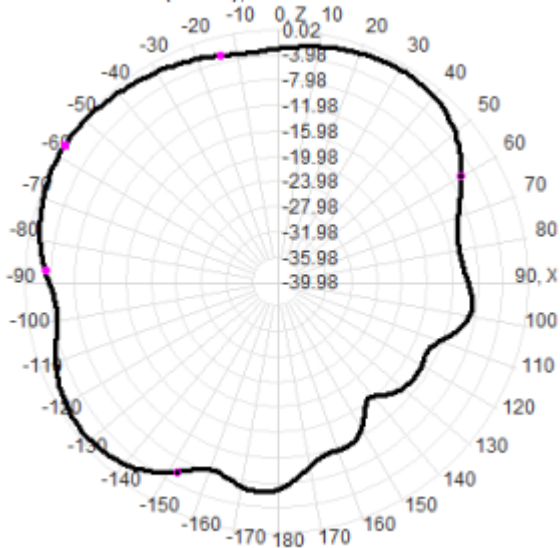
1710.0MHz H+V, Eff: 53.8%



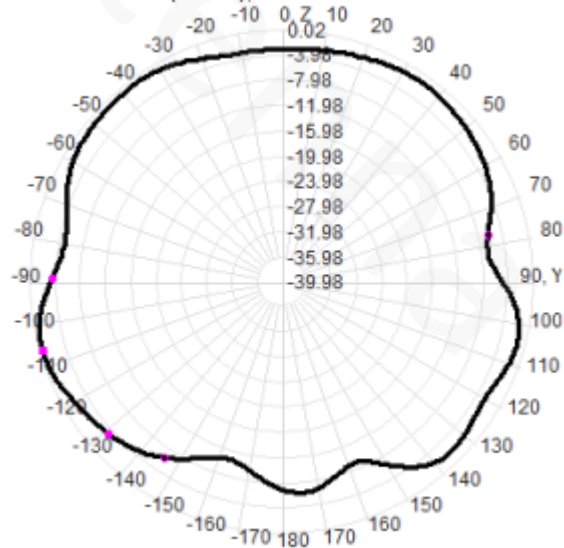
Back View



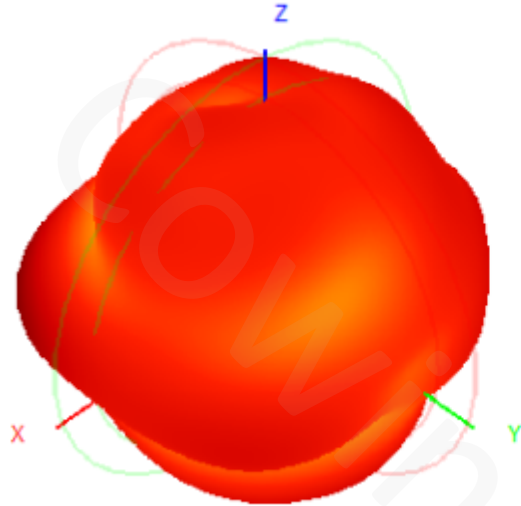
1710.0MHz Total(E1-XZ), Max= 0.02dBi



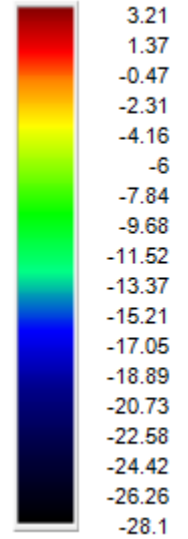
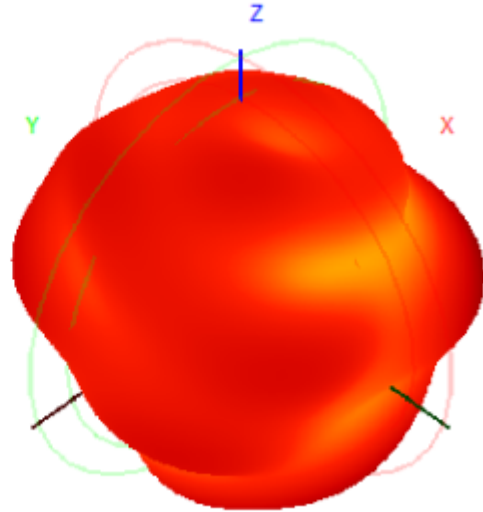
1710.0MHz Total(E2-YZ), Max= -0.49dBi



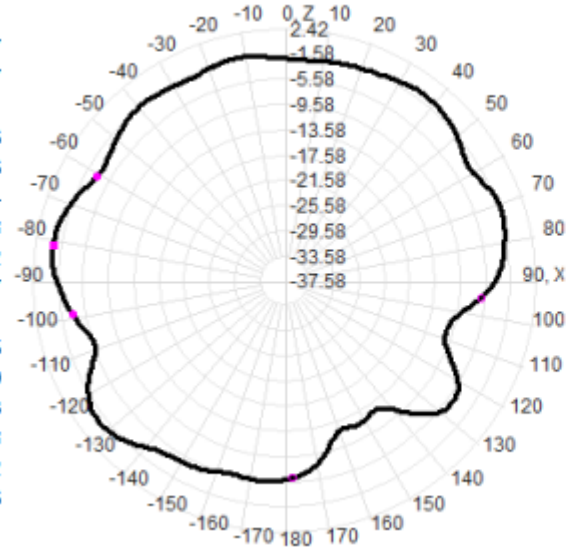
2210.0MHz H+V, Eff: 60.0%



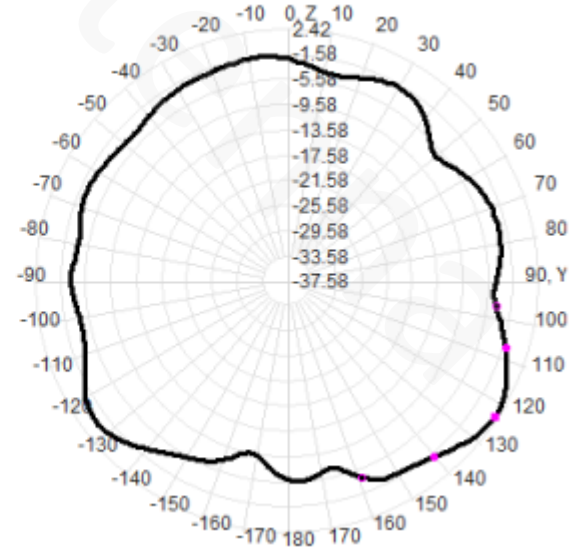
Back View



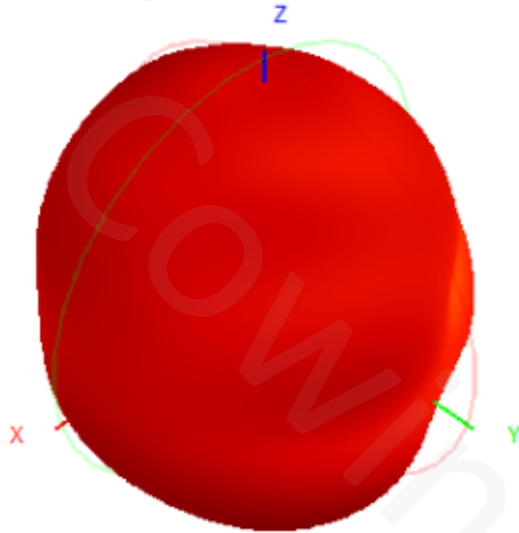
2210.0MHz Total(E1-XZ), Max=-0.39dBi



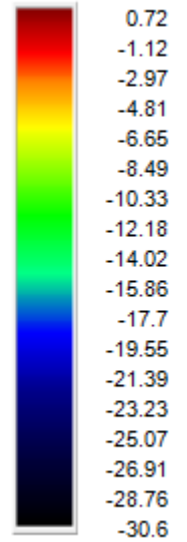
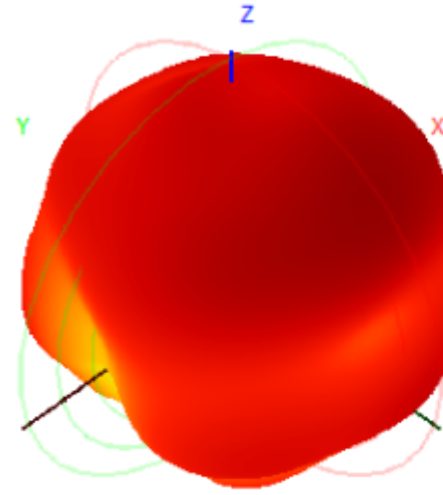
2210.0MHz Total(E2-YZ), Max= 1.72dBi



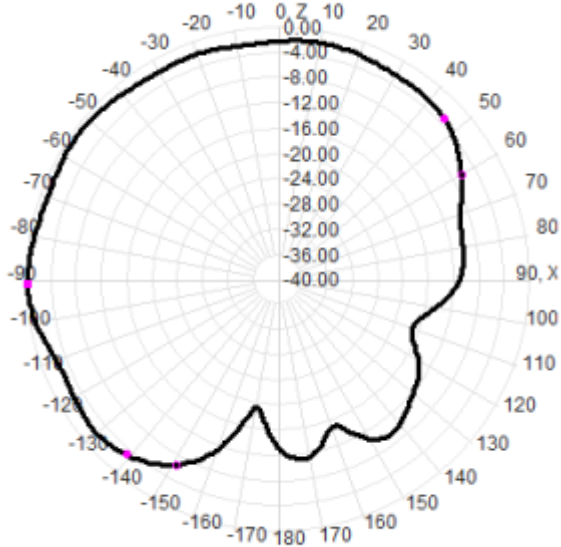
2710.0MHz H+V, Eff: 45.5%



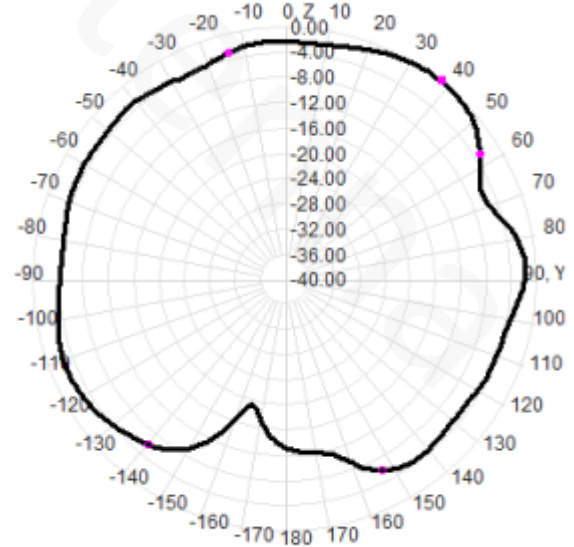
Back View



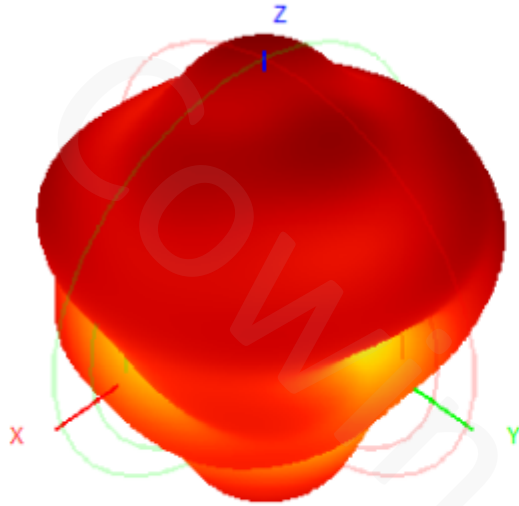
2710.0MHz Total(E1-XZ), Max= -0.33dBi



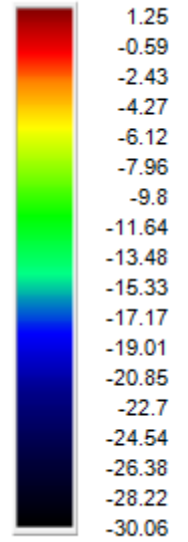
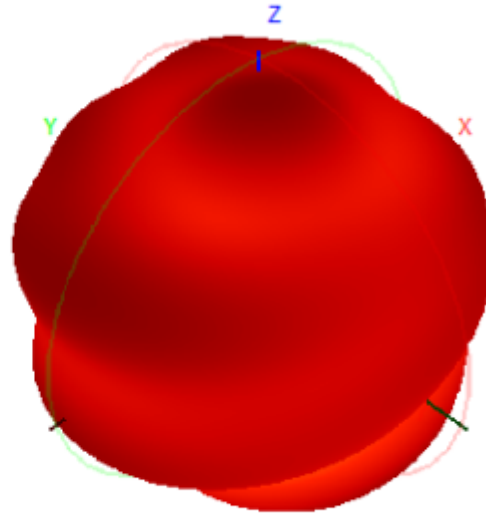
2710.0MHz Total(E2-YZ), Max= 0.00dBi



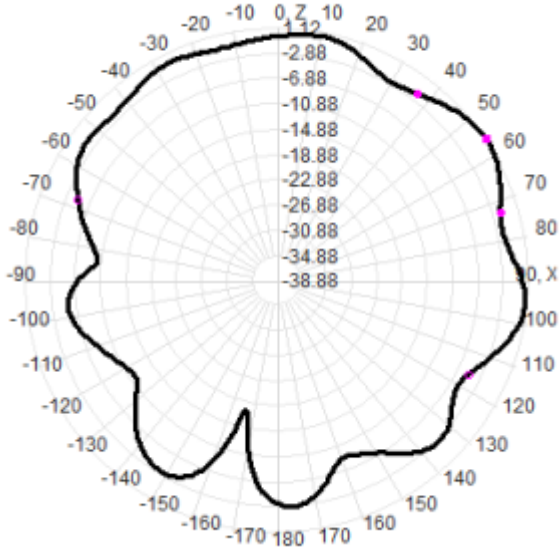
2400.0MHz H+V, Eff: 55.3%



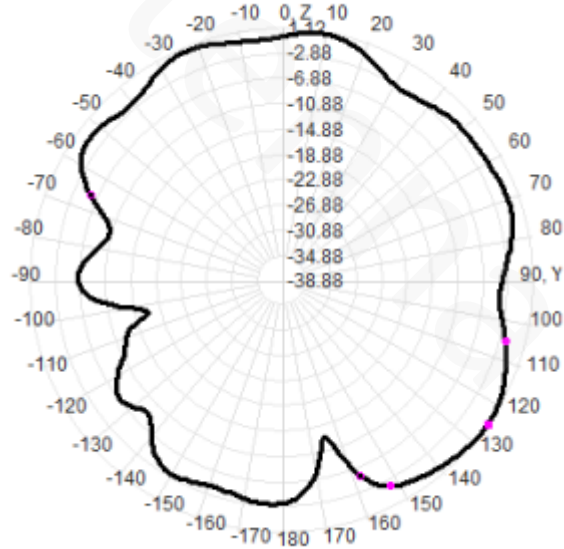
Back View



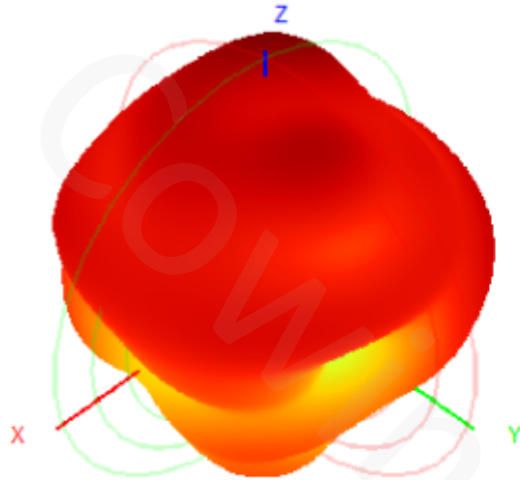
2400.0MHz Total(E1-XZ), Max= 1.12dBi



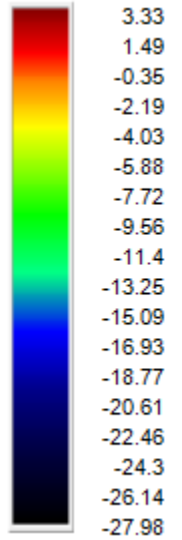
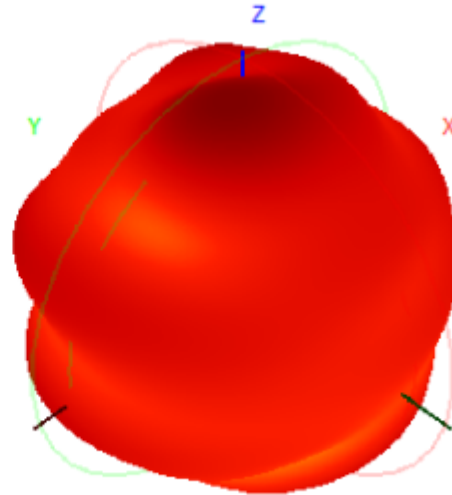
2400.0MHz Total(E2-YZ), Max= 0.77dBi



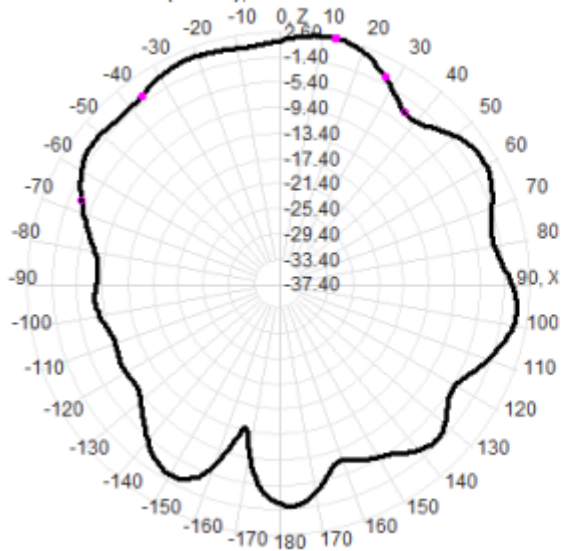
2450.0MHz H+V, Eff: 60.5%



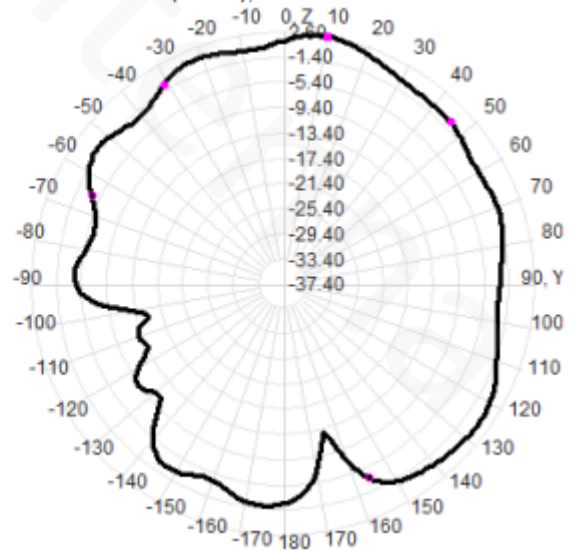
Back View



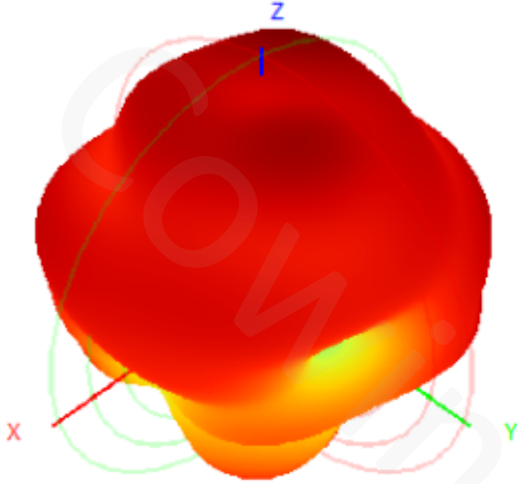
2450.0MHz Total(E1-XZ), Max= 2.60dBi



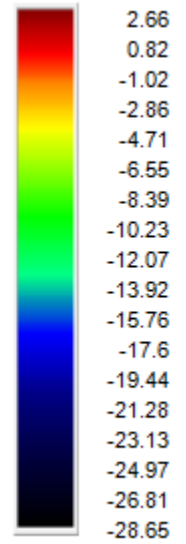
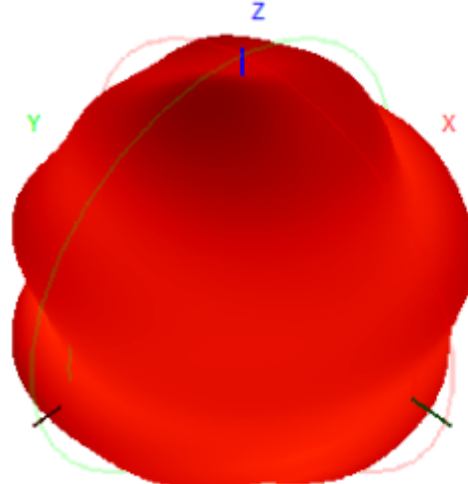
2450.0MHz Total(E2-YZ), Max= 2.50dBi



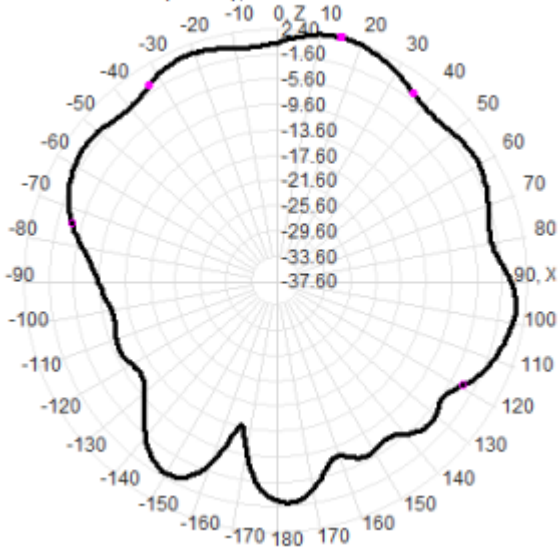
2500.0MHz H+V, Eff: 61.7%



Back View



2500.0MHz Total(E1-XZ), Max= 2.40dBi



2500.0MHz Total(E2-YZ), Max= 1.09dBi

